

## The Wasp Genus *Tachytella* Brauns, 1906 (Hymenoptera: Sphecidae)

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*Abstract.*—The southern African genus *Tachytella* Brauns includes *aureopilosa* Brauns, 1906 (western South Africa) as well as two new species: *heliophila* (western Namibia) and *nana* (southern Namibia, northwestern South Africa). A lectotype is designated for *Tachytella aureopilosa* var. *nana* Arnold, 1936, the latter name being synonymized with *Tachytella aureopilosa* Brauns, 1906. The genus is redescribed using previously known and newly discovered characters, a key to the species is provided, and phylogenetic relationships between the species are discussed.

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### INTRODUCTION

*General.*—*Tachytella* Brauns, a little known genus from southern Africa, was thought to be monotypic until now. Specimens are rarely collected (Bohart and Menke 1976, for example, knew of only six). A decade ago, I discovered an undescribed species in materials from the State Museum Windhoek that Ole Lomholdt, then at the Zoological Museum, Copenhagen, kindly had transshipped to me. During our expedition to Namibia in 1990, Maximilian Schwarz and I collected specimens that represented another new species. These findings prompted me to revise the genus. I follow the format used for my revisions of *Kohliella* Brauns, *Holotachysphex* de Beaumont, and *Gastrosericus* Spinola (Pulawski 1991, 1992, 1995).

*Technical Terms.*—Most morphological terms follow Bohart and Menke (1976), but the mandibular terms are taken from Michener and Fraser (1978). The following terms are here redefined for convenience:

**Clypeal lobe:** the projecting medioventral portion of the clypeus.

#### **Mandible:**

—**adductor ridge:** extends distad from the adductor swellings (on the inner side) and gradually becomes visible from the outside, constituting the distal part of

the mandibular posterior margin; the two portions differ in size, the distal one being higher than the basal one;

—**condylar ridge:** arises from the condyle, extends distad, and forms the basal portion of the posterior mandibular margin; it is angulate distally in many *Larriinae*;

—**condyle:** mandibular articulation on the occipital side of the head capsule;

—**notch:** an emargination on the posterior margin, delimited basally by the condylar ridge and distally by the expanded portion of the adductor ridge;

—**posterior margin:** extends between the condyle and mandibular apex; called externoventral margin by Bohart and Menke (1976) and lower margin by Michener and Fraser (1978); it actually consists of two components: the condylar ridge basally and the adductor ridge distally (the term *posterior* is preferred because the head is hypognathous, and this edge is thus oriented posterad);

**Sternum, tergum:** shortened terms for gastral sternum, gastral tergum.

#### **Vertex:**

—**length:** the distance between a hindocellus and an imaginary line connecting eye hindcorners (i.e., the point where the

inner and the posterior portions of the orbit meet);

—**width**: the shortest interocular distance in the ocellar region.

*Origin of Material*.—The 29 specimens examined apparently are all that have been collected so far. Institutional or personal collections in which the material is deposited are abbreviated in the text as follows (names of contact persons are given in parentheses):

- AMG: Albany Museum, Grahamstown, South Africa (Friedrich W. Gess).
- BMNH: British Museum (Natural History), London, current nonstatutory name: The Natural History Museum (Lorraine Ficken).
- CAS: California Academy of Sciences, San Francisco, California (Wojciech J. Pulawski).
- FSCA: Florida State Collection of Arthropods, Gainesville, Florida (Lionel A. Stange, James R. Wiley).
- MS: Maximilian Schwarz, Ansfelden bei Linz, Austria (personal collection).
- SAM: South African Museum, Cape Town, South Africa, including G. Arnold collection previously housed in Bulawayo, Zimbabwe (Margie A. Cochrane, Vincent B. Whitehead).
- TMP: Transvaal Museum, Pretoria, South Africa (Iléma Fourie).
- USNM: Smithsonian Institution, National Museum of Natural History, Washington, D.C. (Arnold S. Menke).

### Genus *Tachytella*

*Tachytella* Brauns, 1906:56. Type species: *Tachytella aureopilosa* Brauns, 1906, by monotypy.

*Diagnosis*.—*Tachytella* is a member of Larrini (Bohart and Menke 1976) and thus has the hindocelli modified to flat, elon-

gate scars (Figs. 8, 12, 20), the only remnant of a lens being a narrow, translucent band along the scar's outer margin (the band is broadly interrupted on the scar's posterolateral or lateral side, depending on its orientation). Within the tribe, *Tachytella* can be recognized by the following four characters:

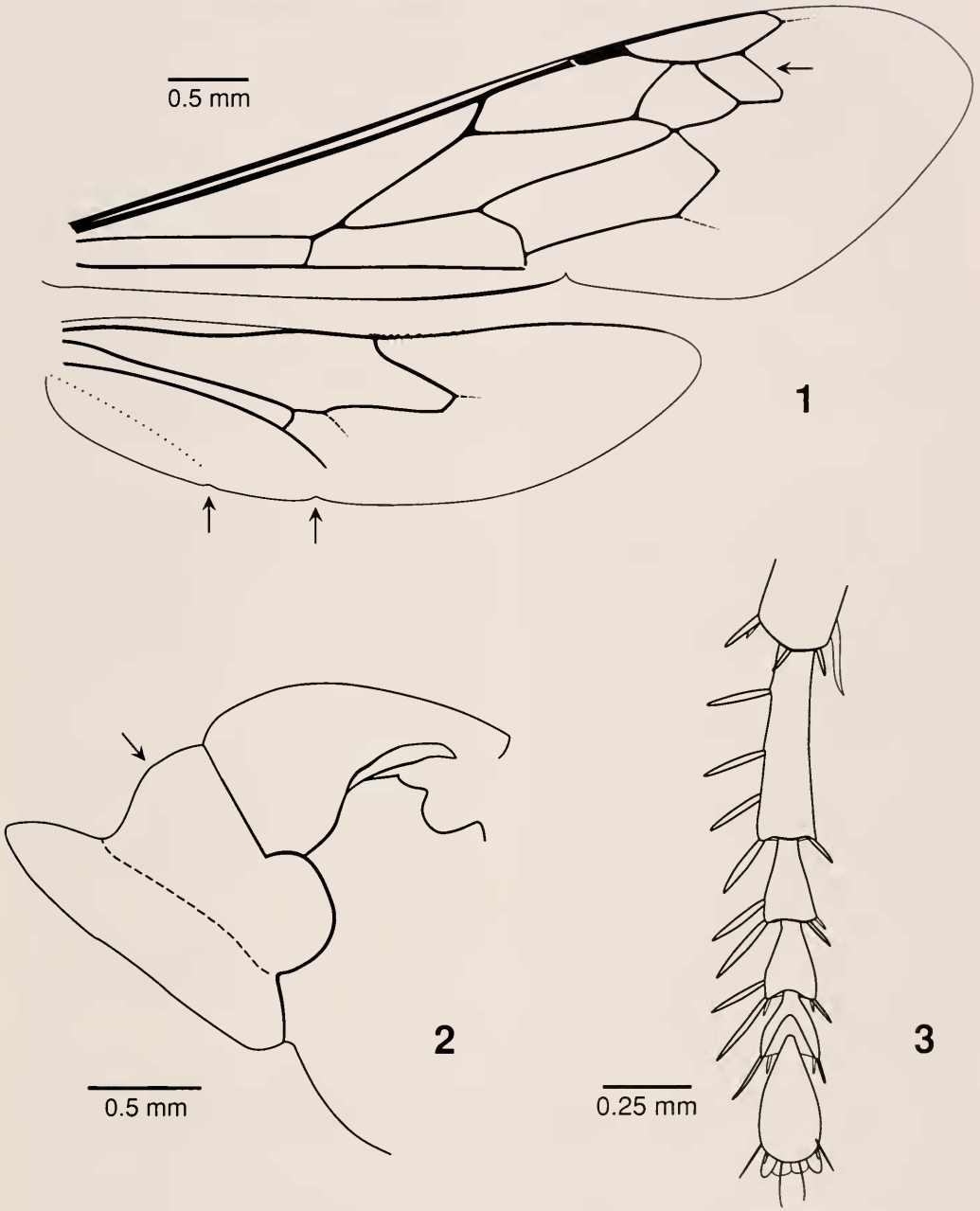
1. The frons has a median, slightly raised, flat area that is delimited by a lateral sulcus (Figs. 6, 10, 18, 22, 28, 31), the sulci being subparallel and close to the orbits. Similar sulci are found in some *Ancistromma* W. Fox, e.g., *capax* W. Fox, and in less specialized *Parapiagetia* Kohl such as *genicularis* (F. Morawitz) and *odontostoma* (Kohl), in which however, the frons is not raised.

2. The pronotal collar is rounded and reaches the scutum level, a condition also found in some *Gastrosericus*, e.g. *baobabicus* Pulawski and *euryypus* Pulawski. *Tachytella*, however, has three submarginal cells, whereas *Gastrosericus* has two.

3. The submarginal cell III in the forewing is essentially rhomboidal (Fig. 1), a previously unused character, with the anterior and posterior margins equal in length or nearly so; the proximal and distal margins are weakly sinuous, almost straight, nearly parallel to each other.

4. The hindwing jugal lobe is short and ends well before crossvein cu-a; consequently, the jugal and anal excisions are widely separated (Fig. 1). A similar condition is found in some specialized *Gastrosericus* such as *braunsi* Arnold, *herero* Pulawski, and *pulchellus* R. Turner (Pulawski 1995).

*Description*.—Bohart and Menke (1976) regarded *Tachytella* as monotypic and, consequently, considered as generic some structures that are found only in *aureopilosa* but not in the other two species (e.g., such male structures as the edentate inner mandibular margin, dentate clypeal free margin, and sterna VI–VIII with dense, erect setae). They thought that the pronotal collar not closely appressed to scutum



Figs. 1-3. Some of the generic characters of *Tachytella*. 1, fore and hindwing of *aureopilosa* (drawn from the holotype, the model Bohart and Menke 1976, used for their illustration); arrows indicate third submarginal cell, jugal excision, and anal excision. 2, anterior part of thorax of *aureopilosa* (arrow indicates pronotum). 3, foretarsus of female *nama*.

also was a generic character, but in fact it is only individual. The following redescription takes into account the three species now recognized and also some structures not considered previously. Included are those features that vary within other Larrini but are universal in *Tachytella*.

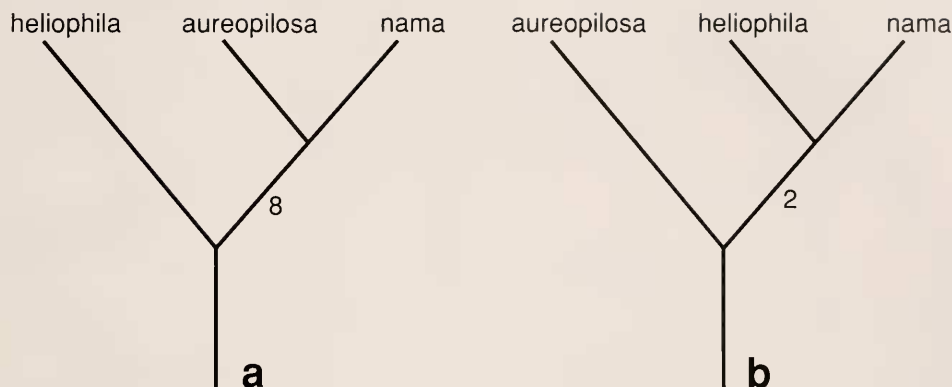
Labrum flat, not emarginate apically, not or barely protruding beyond clypeal free margin; prementum convex but not compressed laterally; stipes nearly flat. Mouthparts not elongate. Paramandibular process broadly separated from back side of clypeus (mandibular socket open). Posterior mandibular margin notched; notch delimited proximally by angulate apex of condylar ridge, and distally by marked, roundly expanded distal portion of adductor ridge. Clypeus produced into mesal lobe, free margin of lateral section concave. Antennal socket narrowly separated from frontoclypeal suture. Inner orbits convergent above. Frons flat, with no glabrous swelling above each antennal socket. Hindocellar scars elongate, broadly diverging anterolaterad (their long axes forming an angle of about 120–140°), shorter than distance that separates each one from midocellus. Occipital carina effaced just short of hypostomal carina. Pronotum anterodorsally with transverse groove; collar swollen, reaching level of scutum. Postspiracular carina evanescent, about as long as midocellar diameter. Episternal sulcus originating near middle of subalar fossa, ending well before reaching anteroventral mesopleural margin; scrobal sulcus absent; subalar fossa not margined below; metapleural flange not expanded. Axilla the usual shape, i.e., not expanded or carinate. Propodeum short, distance between spiracle and metanotum less than spiracle's length; dorsum setose throughout. No additional sclerites between metasternal apex and propodeum (no "propodeal sternum"). Forewing with three submarginal cells, none petiolate; recurrent veins separate or (some *aureopilosa*) forming short petiole. Hindwing crossvein

cu-a vertical (not inclined). Forecoxal apex not expanded into process. Hindcoxal dorsum: inner margin not carinate. Hindtibia not margined. Forebasitarsus and apical tarsomeres without ventral spines. Claws in each pair equal in size. Hindtarsomere II long (0.6–0.7 × hindtarsomere I). Base of tergum I variable: with or without short, oblique carina that extends from each anterolateral corner. Lateral carina of tergum I complete, reaching tergal hindmargin. Tergum II not carinate laterally. Body without erect setae (except setae on apical sterna in male of *aureopilosa*); those on propodeal dorsum inclined obliquely toward head.

Female. Inner mandibular margin with tooth. Forecoxa not carinate anteriorly, venter slightly convex; outer surface of foretibia without preapical spines. Foretarsus with rake that consists of stiff, flattened, widely spaced spines (four on forebasitarsus, two on foretarsomere II); tarsomeres IV: length more than apical width, apicoventral margin emarginate; tarsomeres V: apicoventral margin slightly arcuate. Claws without teeth. Tergum VI fairly convex: angle between lateral margin of tergum and lateral margin of pygidial plate, in side view about 30–40°. Pygidial plate well defined (margined laterally), rounded apically, sparsely punctate and with thin, inconspicuous setae (Figs. 9, 21, 30). Sting sheaths somewhat flattened dorsoventrally.

Male. Foretrochanter and forefemur not emarginate; forebasitarsus I with one rake spine (in basal half); outer, apical spine of foretarsomere II shorter than foretarsomere III; sterna without velvety patches; tergum VII carinate apicolaterally, not depressed apically; sterna III–VI impunctate at least mesally; sternum VIII rounded apically or (some *aureopilosa*) minimally emarginate. Venter of penis valve finely denticulate subapically (Figs. 17, 27, 35).

*Character Polarization.*—The tribe Larrini, of which *Tachytella* is a member, consists of two lineages, the subtribes Larri-



Figs. 4a and b. Cladograms showing hypothetical cladistic relationships of the three species of *Tachytella*; 2: modified cleft of inner mandibular margin, 8: penis valve with medioventral tooth.

na and *Tachytina* (Bohart and Menke 1976). The autapomorphy of *Larrina* is a unique frons: the midocellus is placed in a depression, and the transverse swelling delimiting the depression anteriorly joins a linear swelling along the inner orbit. The hindocelli are oriented along a transverse line, and the transparent lens remnant is horseshoe-like, with the two branches parallel and close to each other, apparently the plesiomorphic condition within the tribe. In *Tachytina*, the frons is the usual plesiomorphic condition, with no depression or swelling, but the hindocelli are oriented in a V-shaped pattern and the lens remnant is clearly derived: the anterior branch is longer than the posterior or (in *Parapiagetia*) the branches are roughly circular (open on the lateral side). Because of the shape of the lens remnant, *Tachytella* is a member of *Tachytina*, but its relationships within the subtribe are unclear. Bohart and Menke (1976) noted that *Tachytella* resembled *Ancistromma* and *Larropsis* Patton in the shape of the mandible, ocellar scar, female foretarsal rake, and male sternum VIII. None of these similarities, however, appears to be a synapomorphy. I have found no single derived character linking *Tachytella* with any of the other nine genera of the subtribe. For the purpose of this analysis, I regard the *Larrina* and the re-

maining *Tachytina* as the outgroup. The characters found in both *Tachytella* and the outgroup are considered plesiomorphic, unless there is strong evidence that they have been acquired independently. The characters present only in some *Tachytella* but not the outgroup are regarded as apomorphic. The character codings are: 0. ancestral, 1 and 2. derived. The following characters have been considered:

1. Female mandible inner margin: sub-basal tooth: 0. well defined, 1. inconspicuous, obtuse (as in *Tachytella aureopilosa*). The tooth is present in most members of the outgroup, but absent in *Larra* Fabricius, the subgenus *Motes* Kohl of *Liris* Fabricius, in *Parapiagetia*, several specialized *Gastrosericus*, and in two *Tachysphex* Kohl (*nefarius* Pulawski and *ramses* Pulawski). Because of their many specializations, none of these are likely to share a unique common ancestor with *Tachytella*, and consequently I regard the presence of a well defined mandibular tooth in *Tachytella* as ancestral.

2. Female mandible inner margin: cleft: 0. narrow, 1. shallow, obtusely angulate (as in *Tachytella aureopilosa*, 2. deep, broad (as in *Tachytella nama*). A cleft is present and narrow in most *Larrinae* (including *Tachytella heliophila*), but absent in *Larra*, the subgenus *Motes* of *Liris*, *Dalara* Ritse-



Fig. 5. Collecting localities of *Tachytella*.

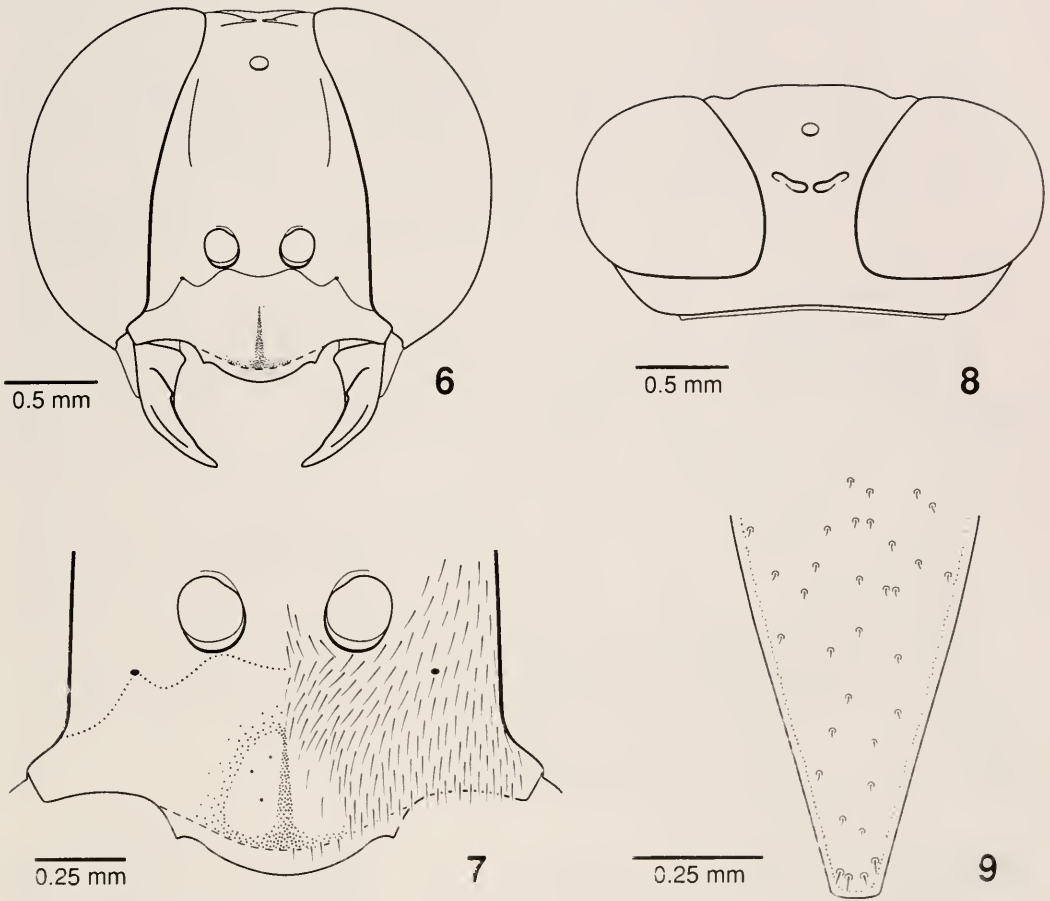
ma, *Paraliris* Kohl, *Holotachysphex*, many specialized *Gastrosericus*, *Parapiagetia genicularis* (F. Morawitz), *Tachysphex nefarius* and *ramses*. None of these is likely to share a unique common ancestor with *Tachytella*, and I therefore accept that a narrow cleft is ancestral in the latter genus. The broad, deep cleft is unique within the tribe.

3. Male clypeus: 0. without longitudinal swellings, 1. swellings present. The clypeal swellings of *aureopilosa* are unique within Larrinae and thus apomorphic.

4. Propodeum: 0. without V-shaped impression, 1. with V-shaped impression. The impression is unique to *Tachytella aureopilosa* and thus apomorphic.

5. Male foretarsus: 0. tarsomere II not expanded, 1. tarsomere II expanded. The expanded tarsomere of *Tachytella aureopilosa* is unique within the tribe and thus apomorphic.

6. Tergum I: 0. with a pair of short, basal carinae, 1. carinae absent. Within Larrini, the carinae are absent in *Gastrosericus*, *Holotachysphex*, *Kolliella*, *Parapiagetia*, *Tach-*



Figs. 6–9. *Tachytella aureopilosa*, female. 6, head frontally. 7, clypeus. 8, head dorsally. 9, pygidial plate.

*ysphex*, many *Tachytes* Panzer, and *Larrop-sis chilopsidis* (Cockereil and Fox). They are present in all other Larrini and other Sphecidae (those with a petiolate gaster are obvious exceptions). I therefore regard the absence of carinae in *Tachytella aureopilosa* as derived.

7. Male gaster: 0. sternal setae all short, 1. setae of sterna VI–VIII long, erect. Sternal setae are short, appressed in most Larrinae, but long, erect on apical sterna in many *Liris* and in *Tachytella aureopilosa*. These species are not likely to share a single common ancestor. In addition, the setal configuration of *T. aureopilosa* is unique and I regard it to be derived.

8. Penis valve: 0. without medioventral

tooth, 1. with medioventral tooth. This tooth, found in *Tachytella heliophila* and *nama*, is unique within Larrinae and thus apomorphic.

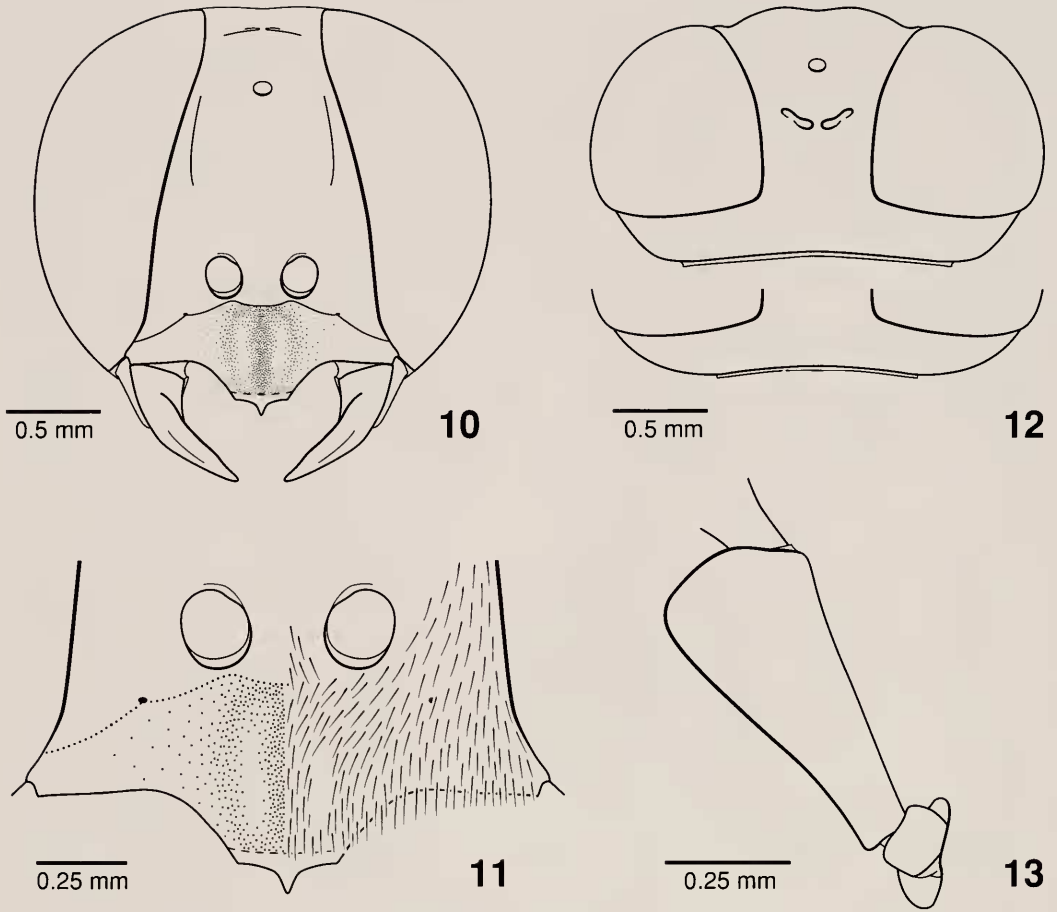
The following 5 characters cannot be polarized because both states are commonly found in the outgroup:

9. Gena: a. thin in dorsal view, b. thick in dorsal view.

10. Mesopleural vestiture: a. not concealing integument, b. concealing integument.

11. Hindtarsomere IV: a. length about 1.0 × apical width, b. length about 1.2–1.3 × apical width.

12. Pygidial plate of female: a. apex with a row of setigerous punctures,



Figs. 10-13. *Tachytella aureopilosa*, male. 10, head frontally. 11, clypeus. 12, head dorsally with outline of vertex showing variation. 13, scape.

b. apex without a row of setigerous punctures.

13. Male mandible: a. inner margin angulate, b. inner margin simple.

Cladistic Analysis.—Distribution of the 8 polarized characters is given below:

Number:	1 2 3 4 5 6 7 8
ancestor:	0 0 0 0 0 0 0 0
<i>aureopilosa</i> :	1 1 1 1 1 1 1 0
<i>heliophila</i> :	0 0 0 0 0 0 0 1
<i>nama</i> :	0 2 0 0 0 0 0 1

Only two derived characters are found in more than one species: character 2 (a

modified cleft on inner mandibular margin) is shared by *aureopilosa* and *nama*, and character 8 (penis valve with medioventral tooth) by *heliophila* and *nama*. The cladogram resulting from character 2 (Fig. 4a) is *heliophila* + (*aureopilosa* + *nama*), the cladogram based on character 8 (Fig. 4b) is *aureopilosa* + (*heliophila* + *nama*). I see no reason to prefer one over the other.

Life History.—Unknown. The presence, in the female, of a foretarsal rake and a pygidial plate suggests ground nesting.

Geographic Distribution (Fig. 5).—Namibia and western half of South Africa.



## KEY TO THE SPECIES

1. Propodeal dorsum with V-shaped impression that begins behind each spiracle and ends at hindmargin (impression inconspicuous in smallest individuals); tergum I basally without pair of short, oblique carinae. Female: clypeus (except basally) with finely, closely punctate median impression that separates two unsculptured, longitudinal areas (Fig. 6); inner mandibular margin with inconspicuous subbasal tooth (Fig. 6). Male: clypeus with pair of glabrous, longitudinal swellings, free margin with small, median tooth (Fig. 10); sterna VI-VIII with dense rows or tufts of erect setae (Fig. 15); penis valve without ventral tooth (Fig. 17) ..... *aureopilosa* Brauns
- Propodeal dorsum without such impression; tergum I basally with pair of short, oblique carinae. Female: clypeal bevel without median row of small punctures; inner mandibular margin with well-defined subbasal tooth (Figs. 18, 28). Male: clypeus with no longitudinal swellings, free margin without small, median tooth; sterna without dense rows or tufts of erect setae; penis valve with ventral tooth (Figs. 27, 35) ..... 2
2. Mesopleural vestiture conspicuous, fully concealing integument. Length of hindtarsomere IV  $1.2-1.3 \times$  apical width. Female: free margin of clypeal lobe weakly arcuate, corner well defined but not prominent (Fig. 18); inner mandibular margin with usual, narrow cleft (Fig. 18). Male: clypeal lobe broad, nonprominent (Fig. 22); inner mandibular margin simple (Fig. 22) ..... *heliophila* sp. n.
- Mesopleural vestiture inconspicuous, integument easily visible. Length of hindtarsomere IV about  $1.0 \times$  apical width. Female: free margin of clypeal lobe sinuate, with prominent corner (Fig. 28); inner mandibular margin with broadly expanded cleft (Fig. 28). Male: clypeal lobe prominent, markedly narrowing anterad (Fig. 31); trimmal margin obtusely dentate (Fig. 31) ..... *nana* sp. n.

## DESCRIPTIONS OF SPECIES

Diagnostic characters for each species are given in the key and are not repeated individually in the descriptions below.

*Tachytella aureopilosa* Brauns  
Figures 6-17

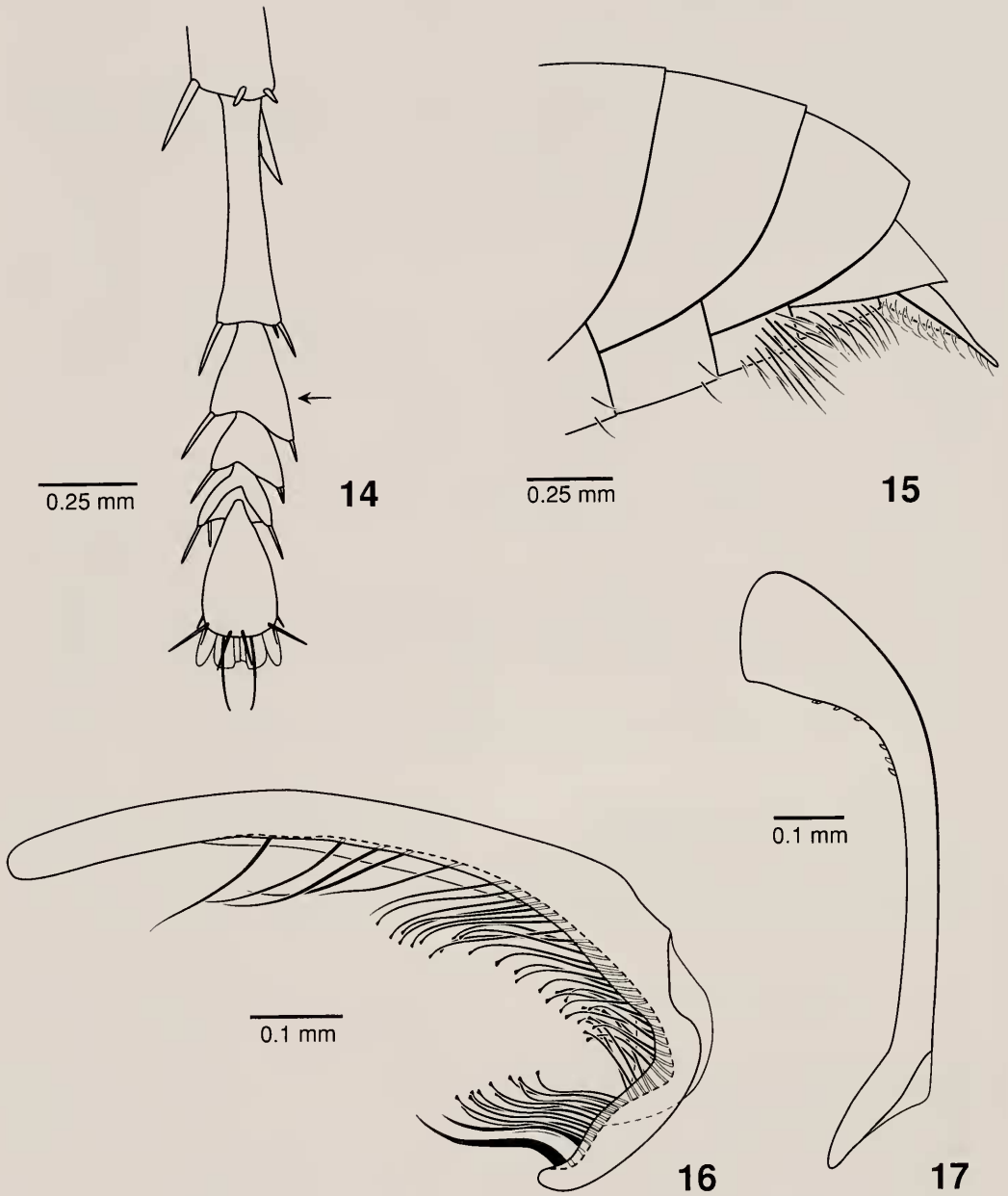
*Tachytella aureo-pilosa* Brauns, 1906:57, male, incorrect original hyphenation. Holotype: male, South Africa: Cape Province: Willowmore (TMP), examined.—Arnold 1923:218 (revision), 1930:5 (listed); Bohart and Menke 1976:231 (illustration of ocelli), 253 (illustration of male head), 255 (illustration of wings), 257 (listed), 258 (illustrations of pronotum and scutum), 268 (illustration of female foretarsus), 279 (illustration of male sternum VIII), 280 (illustration of male genitalia); Gess 1981:19 (South Africa: nesting probably in friable soils).

*Tachytella aureo-pilosa* race *nana* Arnold, 1936:29, female, male. Lectotype: male, South Africa: Cape Province: Resolution in Albany District

(TMP), present designation, examined. New synonym.—As *Tachytella aureopilosa nana*: Bohart and Menke 1976:253 (illustration of male head), 256 (new status, listed).

*Synonymy*.—Arnold (1936) described a var. *nana* for specimens that had red gastral segments I-III, shallower V-shaped impression on the propodeal dorsum, and truncate rather than shallowly emarginate male sternum VIII. Because these characters vary individually, I regard var. *nana* as a synonym of *aureopilosa*.

*Description*.—Gena thin in dorsal view (Figs. 8, 12). Vertex with triangular, glabrous, impunctate, dull area that extends from orbit toward midline. Head, thorax, coxae, and femora minutely punctate, punctures no more than 1 diameter apart, hence integument mat except for shiny clypeal swellings in male. Propodeal dorsum, in most specimens studied, with pair of impressions that meet postero-

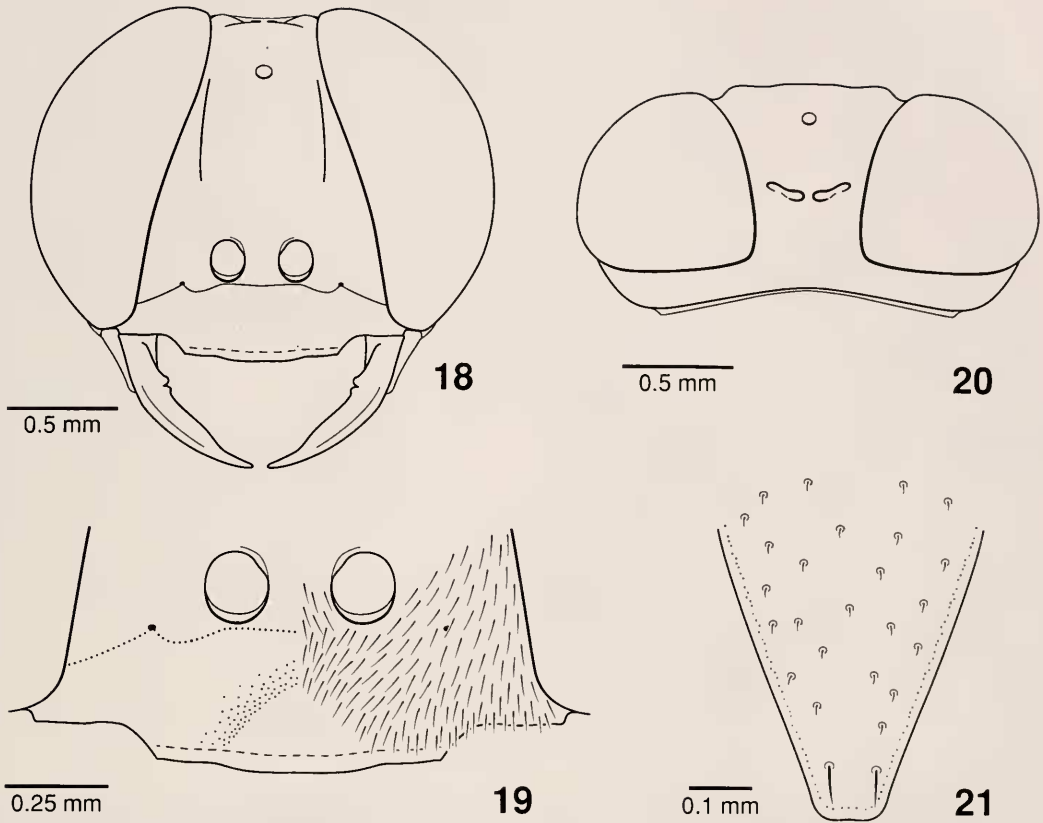


Figs. 14-17. *Tachytella aurcopilosa*, male. 14, foretarsomere. 15, gastral apex in profile. 16, volsella. 17, penis valve.

mesally and delimit triangular area resembling propodeal enclosure of most Sphecidae (impressions barely visible in smallest specimens, apparently a result of allometric growth). Propodeal hindface not ridged. Femora and tibiae setose

throughout. Length of hindtarsomere IV about  $1.0 \times$  apical width. Gastral segment I without basolateral, oblique carina.

Mesopleural vestiture concealing integument.



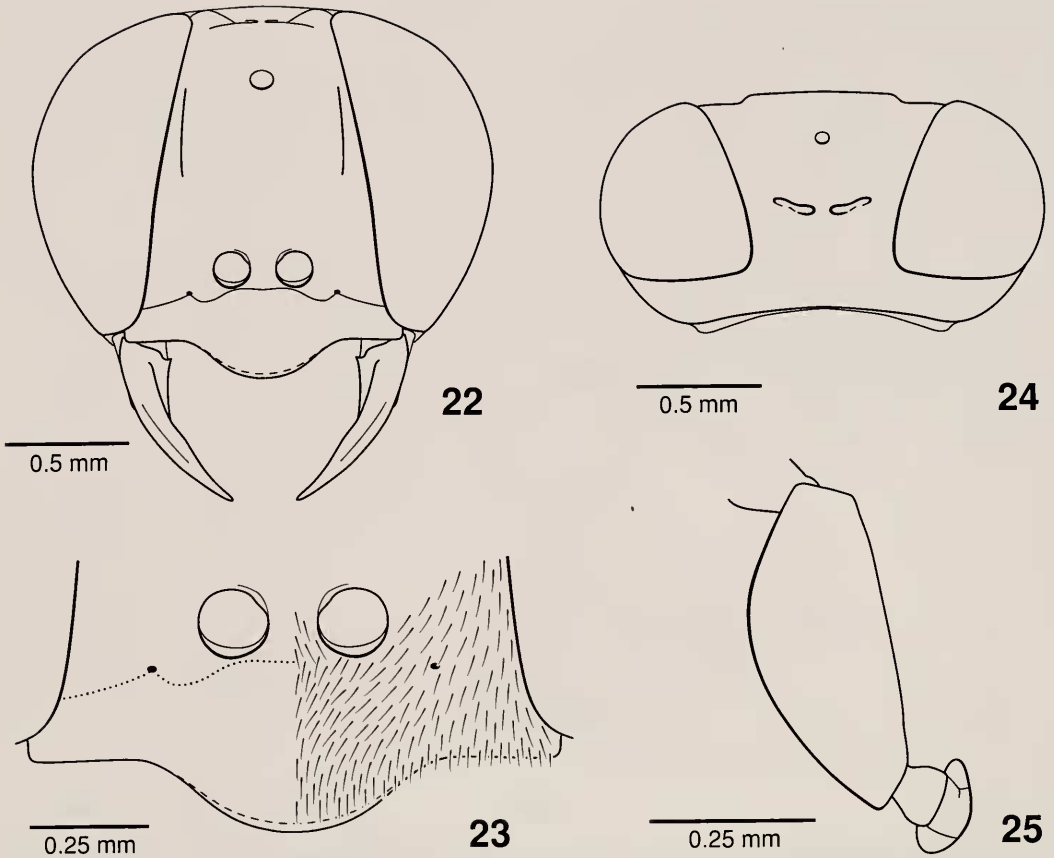
Figs. 18–21. *Tachytella heliophila*, female. 18, head frontally. 19, clypeus. 20, head dorsally. 21, pygidial plate.

Head and thorax black but the following are reddish: mandible (apical third dark), scape, tegula, and humeral plate. Gastral segment I to I–III red, remainder black. Mid- and hindfemora black, forefemur (except dorsally), tibiae and tarsi red. Wings nearly hyaline. Terga I–V silvery fasciate apically.

Female.—Mandible: inner margin divided by an obtuse angle into basal and distal portions, with shallow, obtusely angulate cleft. Clypeus with median, finely, densely punctate impression that separates two unsculptured, longitudinal areas (Figs. 6, 7); lobe free margin arcuate except markedly concave near corner, which is prominent (Figs. 6, 7). Length of flagellomere I  $2.0 \times$  apical width. Vertex width  $1.4 \times$  length. Tergum V punctate and se-

tose throughout. Pygidial plate with preapical row of setigerous punctures (Fig. 9). Length 7.3 mm

Male.—Mandible: inner margin simple, not angulate (Fig. 10). Clypeus (Figs. 10, 11): lobe free margin with median tooth, corner well defined but not prominent; distance between corners about  $0.8 \times$  distance between corner and orbit; middle section with a pair of longitudinal swellings that are either microsculptured, dull, or unsculptured, shiny. Scape elongate, swollen apicoventrally (Fig. 13). Length of flagellomere I  $1.7\text{--}1.8 \times$  apical width. Vertex width  $1.6 \times$  length. Foretarsomere II enlarged (Fig. 14). Tergum VII: punctures averaging about 1 diameter apart, some of them about 3 diameters apart. Apex of sternum VI, sternum VII, and VIII with



Figs. 22–25. *Tachytella heliophila*, male. 22, head frontally. 23, clypeus. 24, head dorsally. 25, scape.

erect setae; longest setae equal to basal mandibular width. Length: 6.1–8.5 mm. Volsella: Fig. 16. Penis valve without ventral tooth (Fig. 17).

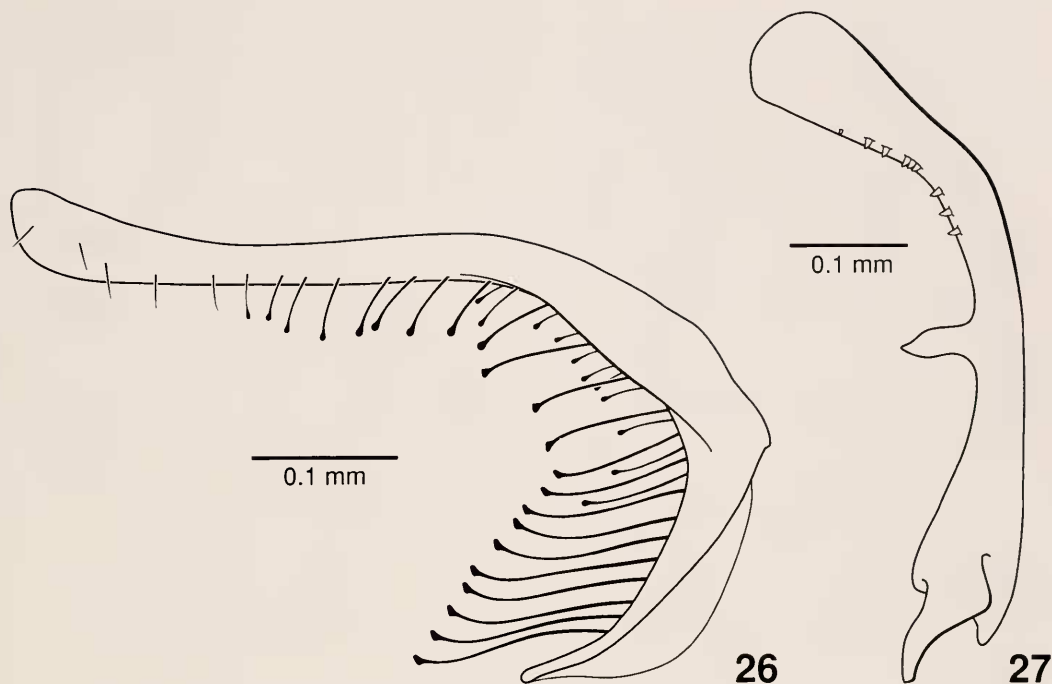
*Geographic Distribution.*—Western South Africa.

*Records.*—SOUTH AFRICA: **Cape Province:** Colesberg (1 female, SAM), Grahamstown: Hilton, sand pit (1 male, AMG), NE Ouberg Pass 31 road km NE Montagu at 33°39'S 20°18'E (1 male, AMG), Resolution in Albany District (1 female, 1 male, AMG; 1 male, SAM; 1 headless female, 1 male lectotype of *nana*, TMP), 10 km W Steinkopf (1 female, FSCA), Willowmore (1 male, TMP, holotype of *aureopilosa*), Worcester (3 males, BMNH; 1 male, USNM).

*Tachytella heliophila* Pulawski, new species  
Figures 18–27

*Name Derivation.*—*Heliophila*, a Neolatin feminine adjective derived from two Greek words: helios, sun; and philos, a friend; with reference to the open, sunny habitat where the species was found.

*Description.*—Gena thin in dorsal view (Figs. 20, 24). Vertex without impunctate, triangular area. Head, thorax, coxae, femora and tibiae minutely punctate, punctures no more than 1 diameter apart, hence integument mat except for the unsculptured, shiny clypeal bevel. Propodeal hindface not ridged. Femora and tibiae setose throughout. Length of hindtarsomere IV 1.2–1.3 × apical width. Gastral segment I basolaterally with short, oblique carina.



Figs. 26 and 27. *Tachytella heliophila*. 26, volsella. 27, penis valve.

Mesopleural vestiture concealing integument.

Head and thorax black but the following are reddish: mandible (apical third black), clypeal bevel anteriorly, scapal venter apically, pronotal lobe, tegula, and humeral plate. Gaster red. Coxae and femora black (femora red apically), tibiae and tarsi red. Wings hyaline. Terga I–V silvery fasciate apically.

Female.—Mandible: inner margin with small subbasal tooth and narrow cleft (Fig. 18). Clypeus (Figs. 18, 19): free margin of lobe arcuate, corner angulate but not prominent; apicomedian portion of middle section shiny, practically unsculptured (with only a few microscopic punctures). Length of flagellomere I  $2.75 \times$  apical width. Vertex width  $1.7 \times$  length. Tergum V punctate and setose throughout. Pygidial plate with preapical row of setigerous punctures (Fig. 21). Foretibia without preapical spines. Length 6.6–7.5 mm.

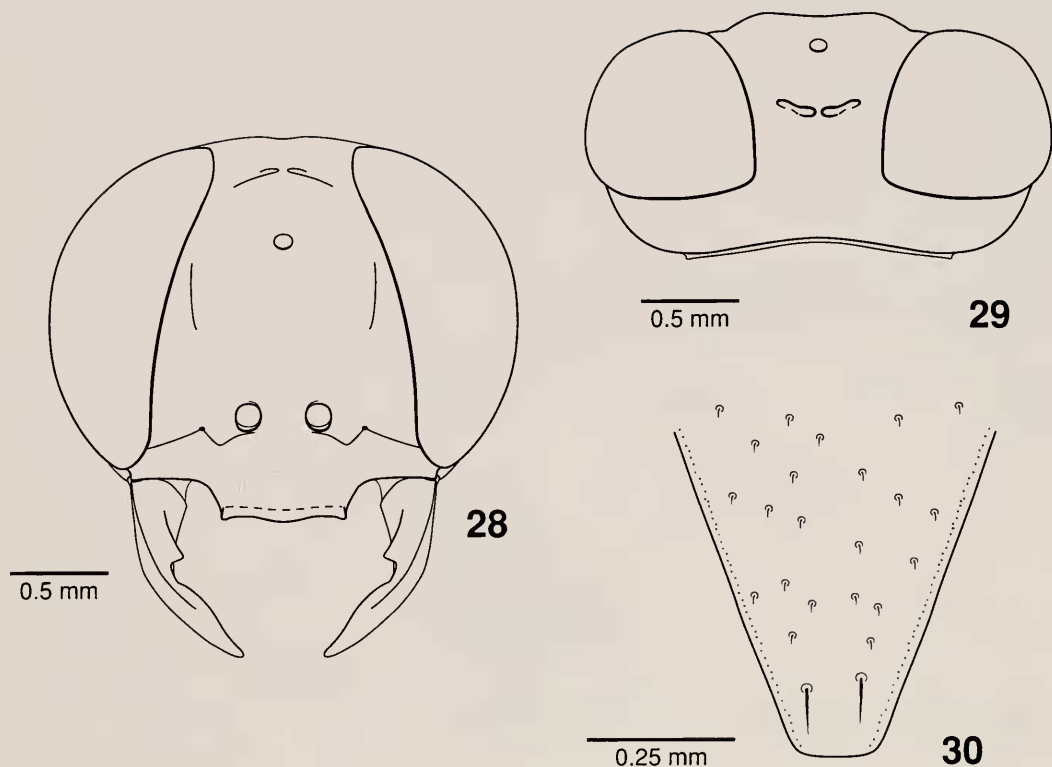
Male.—Mandible: inner margin simple,

not angulate (Fig. 22). Clypeus (Figs. 22, 23): lobe free margin arcuate, corner obtusely angulate; surface finely punctate and setose throughout except for narrow apical lip; distance between corners about  $0.9 \times$  distance between corner and orbit. Scape swollen ventrally (Fig. 25). Length of flagellomere I  $2.1 \times$  apical width. Vertex width  $3.0 \times$  length. Tergum VII: punctures averaging less than one diameter apart. Length 6.4 mm. Volsella: Fig. 26. Penis valve with ventral tooth near mid-length (Fig. 27).

*Geographic Distribution*.—Known from a single area in Namib desert, western Namibia.

*Records*.—Holotype: female, Namibia: Karibib District: 65 km SW Usakos, 24 Feb. 1990, W.J. Pulawski (CAS).

Paratypes: NAMIBIA: **Karibib District**: 55 km SW Usakos, 1 Mar. 1990, W.J. Pulawski (1 female, CAS); 65 km SW Usakos, M. Schwarz, 24 Feb. 1990 (1 female, MS), 1 Mar. 1990 (1 female, MS; 1 male, CAS).



Figs. 28–30. *Tachytella nama*, female. 28, head frontally. 29, head dorsally. 30, pygidial plate.

*Tachytella nama* Pulawski, new species

Figures 28–35

*Name Derivation.*—*Nama*, a Hottentot tribe that immigrated from southern Africa into the central Namib; a noun in apposition to the generic name.

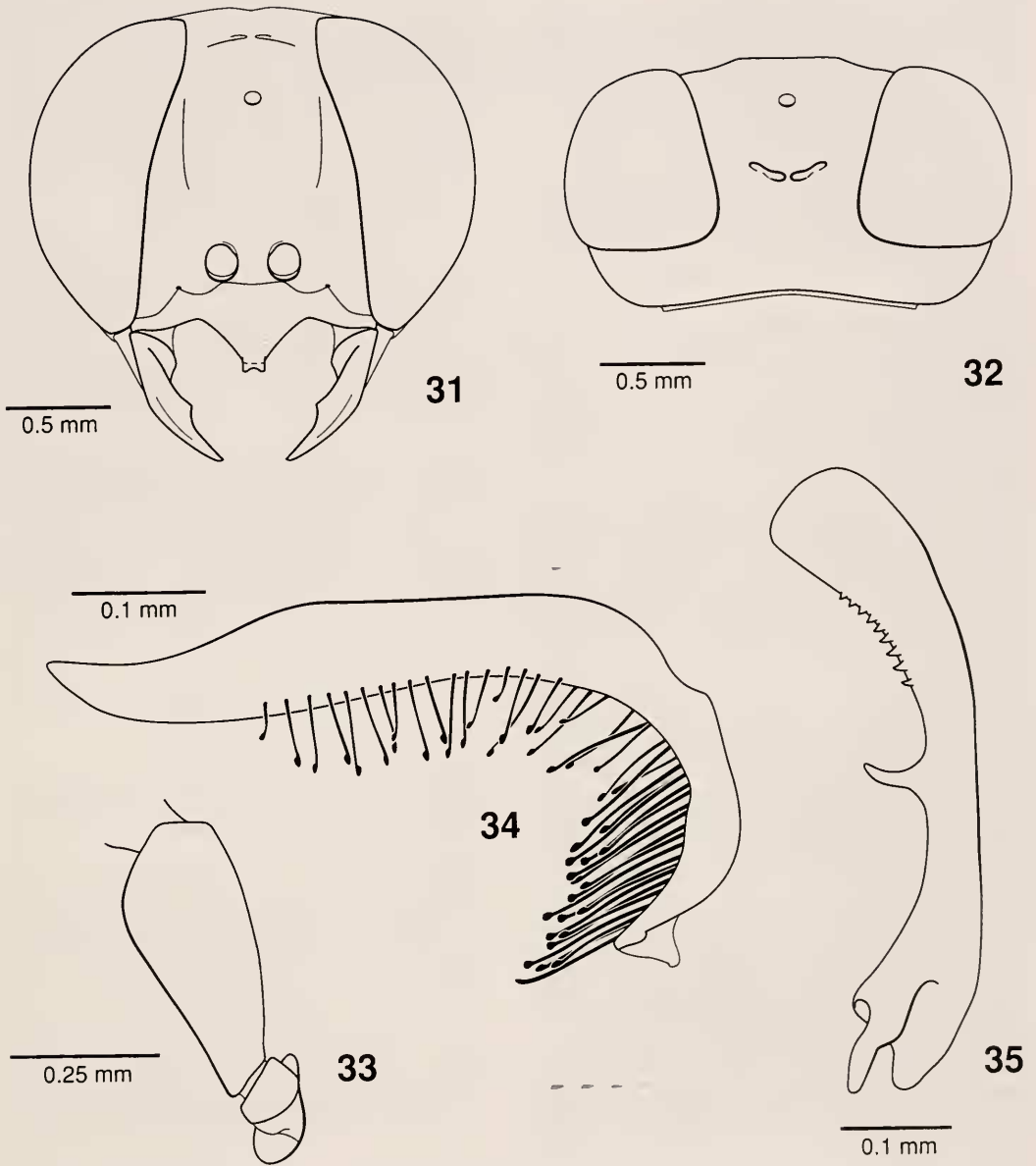
*Description.*—Gena thick in dorsal view (Figs. 29, 32). Vertex without impunctate, triangular area. Scutal punctures varying from mostly about 1 diameter apart (female from Goegap) to many diameters apart (most specimens). Mesothoracic venter with minute punctures that are several diameters apart. Propodeal hindface microscopically, densely ridged and with evanescent punctures. Fore- and midfemoral venter with a few, scattered punctures, asetose. Outer side of foretibia as well as mid- and hindtibial dorsum impunctate, asetose. Length of hindtarsomere IV about

1.0 × apical width. Gastral segment I basolaterally with short, oblique carina.

Mesopleural vestiture inconspicuous, not concealing integument.

Head and thorax black except mandible yellowish basally and reddish distally, middle clypeal lobe of male reddish, male flagellum yellowish brown ventrally. Gastral segments I–III red, remainder black. Wings almost hyaline. Terga I–III silvery fasciate apically, but fasciae evanescent in most specimens.

Female.—Mandible: inner margin with subbasal tooth and broadly expanded cleft (Fig. 28). Clypeus (Fig. 28): lobe free margin sinuous, corner prominent; surface all or largely unsculptured (at most punctate basally). Length of flagellomere I 2.0 × apical width. Vertex width 2.4 × length. Tergum V with impunctate, gla-



Figs. 31–35. *Tachytella nama*, male. 31, head frontally. 32, head dorsally. 33, scape. 34, volsella. 35, penis valve.

brous apical depression. Pygidial plate with no preapical row of setigerous punctures (Fig. 30). Foretibia with two spines between inner surface and dorsum: one at midlength, the other at two thirds of length. Length 7.5 mm.

Male.—Mandible: inner margin obtusely angulate (Fig. 31). Clypeus (Fig. 31):

middle section markedly convex; lobe prominent, markedly narrowing anterad, with unsculptured apical part and shallowly emarginate anterior margin. Scape minimally swollen ventrally (Fig. 33). Length of flagellomere I  $1.5 \times$  apical width. Vertex width  $2.4 \times$  length. Tergum VII: punctures averaging more than one

diameter apart. Length 7.2 mm. Volsella: Fig. 34. Penis valve with ventral tooth (Fig. 35) near midlength.

*Geographic Distribution*.—Southern Namibia and northwestern South Africa.

*Records*.—Holotype: female, South Africa, Cape Province: Hester Malan [now Goegap] Nature Reserve near Springbok, 15–21 Oct. 1987, F.W. and S.K. Gess (AMG).

Paratypes: NAMIBIA: **Lüderitz District**: Namuskluft 88, 2716 Dd [= between 27°45' and 28°00'S and 16°45' and 17°00'E], collector unknown, 12–15 Sept. 1973 (1 female, SMW), 7–15 Oct. 1970 (1 male, SMW).

**SOUTH AFRICA: Cape Province**: Anenous, 29°14'30"S, 17°34'45"E, 11–13 Oct. 1988, D.W. Gess (2 females, AMG); Dikbome, Merweville Koup, [South African] Museum Expedition, Oct. 1952 (1 male, SAM); Hester Malan [now Goegap] Nature Reserve near Springbok, 15–21 Oct. 1987, F.W. and S.K. Gess (1 female, CAS); same data but 10–12 Oct. 1988 (1 male, AMG); between Kamieskroon and Springbok, [South African] Museum Staff, Oct. 1952 (2 females, CAS, SAM).

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